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Neural Networks and Artificial Intelligence

8th International Conference, ICNNAI 2014
Brest, Belarus, June 3-6, 2014
Proceedings

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Preface

The International Conference on Neural Network and Artificial Intelligence (ICNNAI) started its history in October 1999 in Brest, Belarus. Since then, conferences have been held in 2001, 2003, 2006, 2008, 2010, 2012, with each one evolving to be better than its predecessors. The conference in 2014 was the eighth conference in this series.

In October 2013, with still 8 months to go, while planning how to further develop the conference this time, we received an e-mail from Springer with the suggestion of publishing our proceedings in Springer's CCIS series. It was a pleasant surprise, as this would be a good chance for us to make a big step toward the future. Of course, we applied by sending the required information. It was conditionally accepted after what they wrote was "a tough discussion in the editorial board." The conditions seemed quite demanding but we agreed. Why not? An international conference is not "a meeting of birds of a feather" nor "a reunion of old ex-scientists.! It is natural to aim for a high conference level.

Thus, the submission phase started, and after this phase we received 27 submissions. Our 26 international Program Committee members then reviewed these submissions with one paper being reviewed by three different reviewers. As a result, 16 papers were accepted. Then, based on these accepted papers, the editorial board discussed whether the conditions had been met or not. We had to wait for about 20 days, until the editorial board finally sent us the good news of the acceptance of the proceedings as a CCIS volume. It was with the comment, "We expect and trust that you have arranged a thorough and competitive paper reviewing and selection process to ensure that only high-quality papers are accepted for publication that present substantial novel research achievements." Also, it was mentioned "the editorial board has noticed that the acceptance rate is quite above average for CCIS volumes. ... Still, in the future, we expect ICNNAI to increase the number of submissions, the geography of authors, and aim at decreasing the acceptance rate." We expect that, too. Now we are sure that ICNNAI 2014 was the landmark event in the history of this conference.

ICNNAI 2014 was made up of four categories of sessions: a plenary session, a regular session, a round table discussion, and a session with papers accepted after the deadline. All the sessions were held in a single track, and we offered enough time for hot discussions after each of the talks.

In the plenary session, the topic on forest maintenance was discussed. In Belarus, there is a vast forest called Belovezhskaya Pushcha National Park which is said to be the home of 900 plants and 250 animals and birds, including several rare species. As such, we invited Professor Koji Nakamura (Kanazawa University, Japan) whose specialty is maintenance of forest resources. The talk followed two short presentations about "Forests in Belarus" and "Forest Management from IT Prospects." The round table discussion started with a 40-minute talk

on “Formal Definitions of Machine Intelligence.” Then we discussed “whether we can achieve a human-like artificial intelligence using neural networks?” The session with papers accepted after the deadline was organized for new interesting results obtained after the deadline. Position papers or reports with premature results were also welcomed. The reports are not included in this volume but appear in a booklet published by the university press, which was delivered to all the participants.

Today there are numerous conferences on neural networks or on artificial intelligence. As far as we know, however, there exist is such conference on artificial intelligence specifically “by” neural networks. At this point in our conference series, papers that report on artificial intelligence “by” neural network are few, but as most of the papers are on neural network “or” artificial intelligence. We hope this conference will evolve to be a unique event where we can discuss the realizations of human-like intelligence “by” using neural networks in the foreseeable future.

June 2014

Vladimir Golovko
Akira Imada

Organization

ICNNAI 2014 was organized by the Department of Intelligent Information Technology, Brest Technical University.

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Fig. 1.

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